

1/35

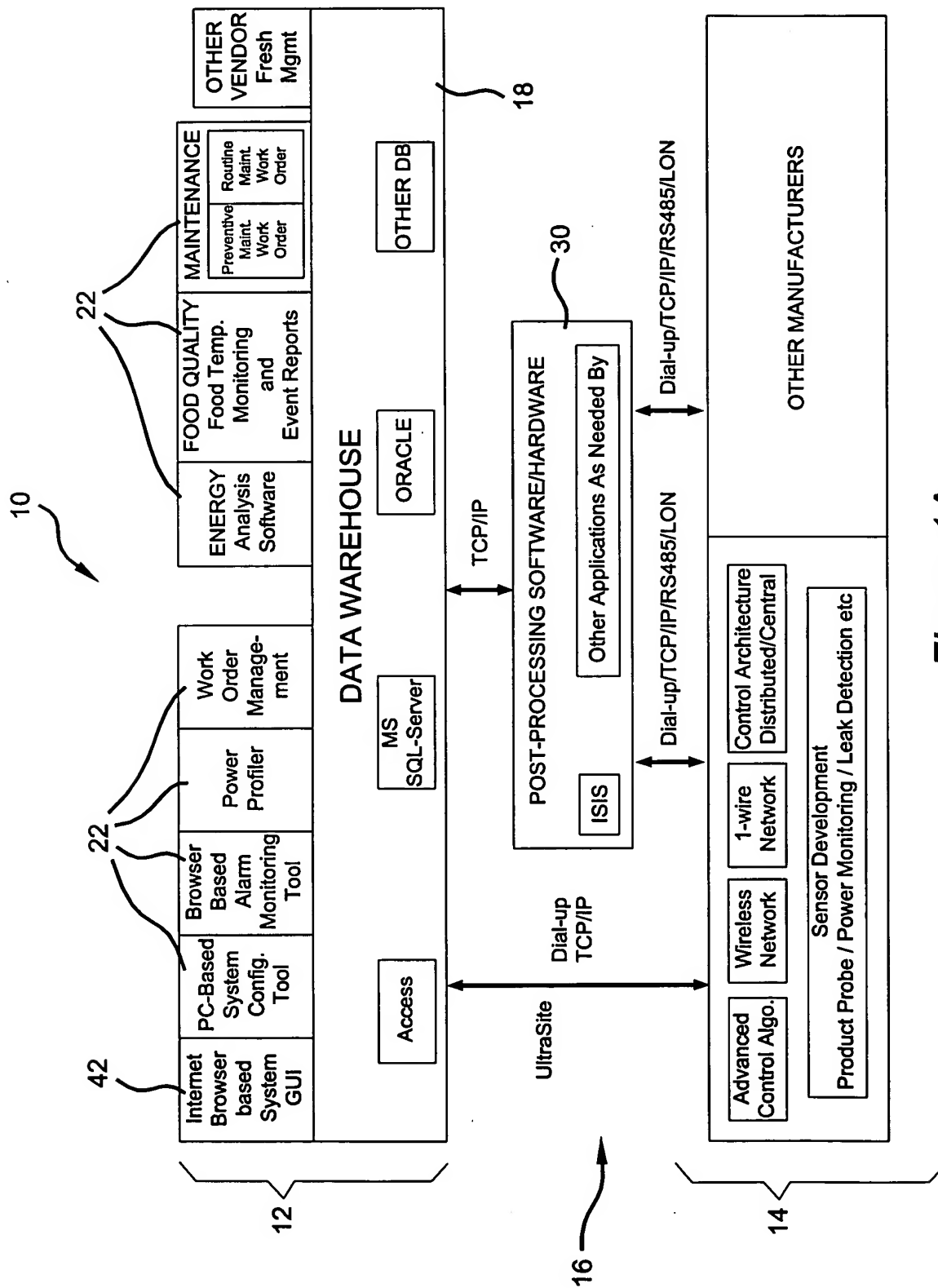


Figure 1A

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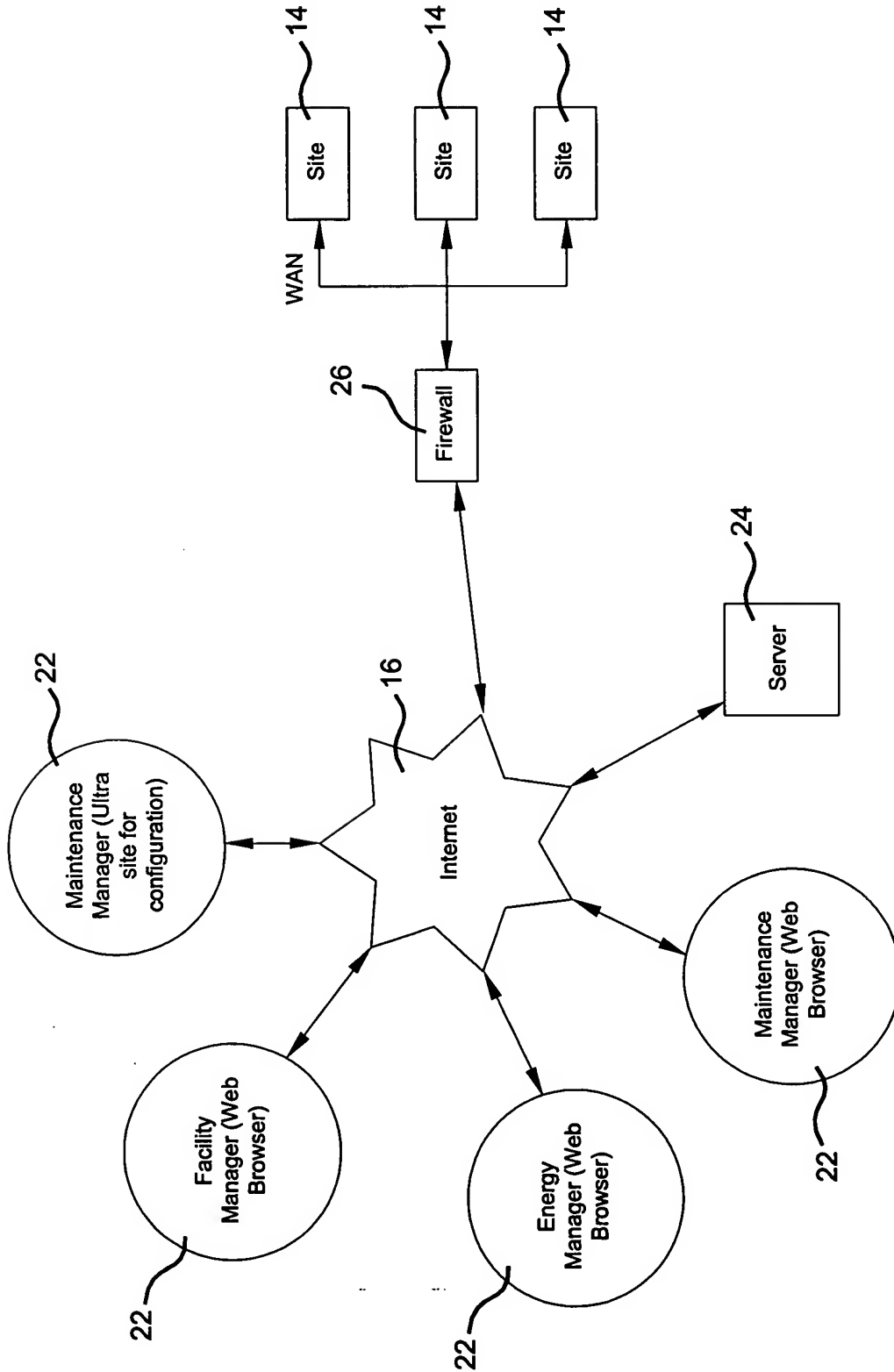


Figure 1B

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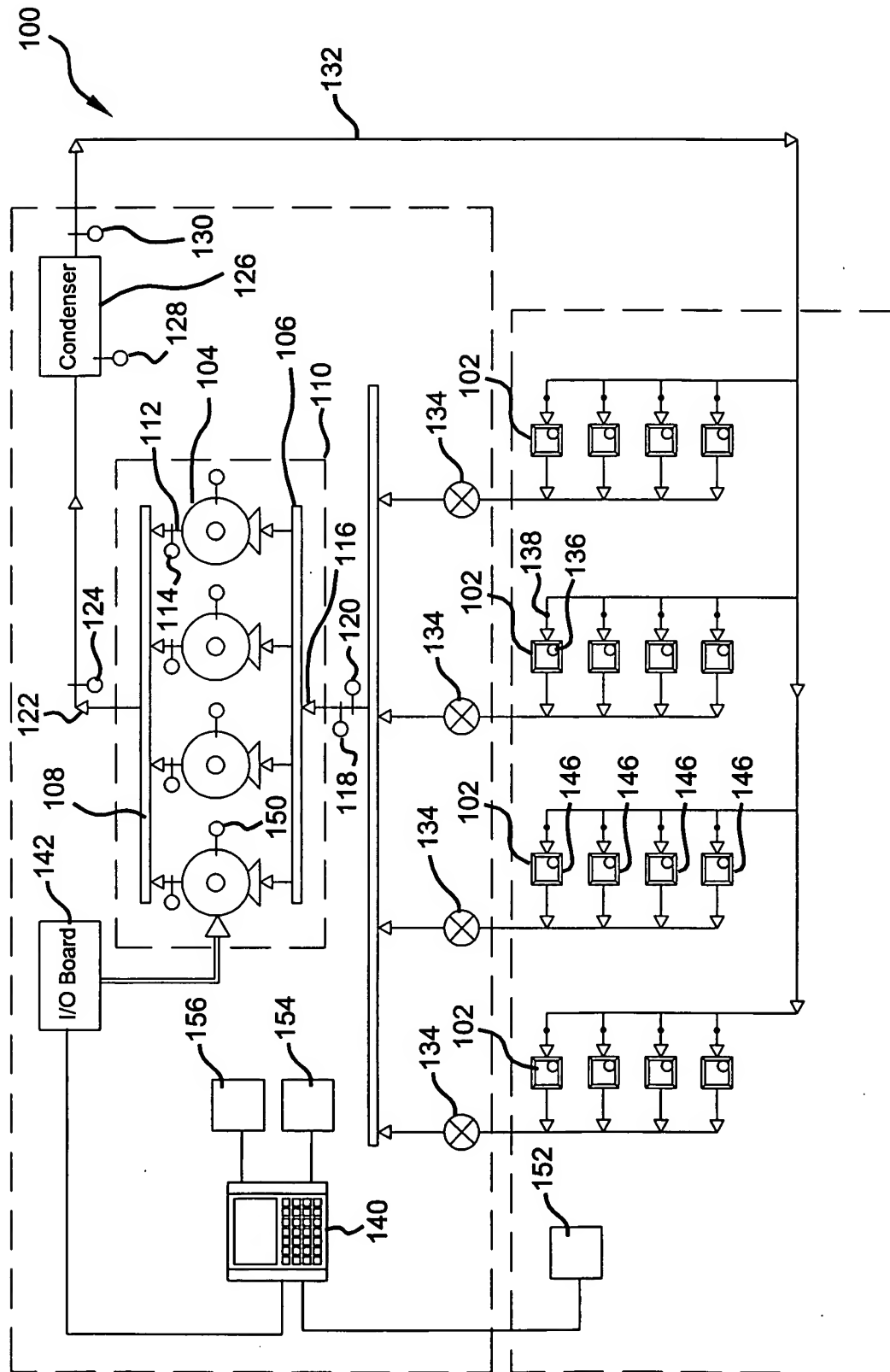


Figure 2

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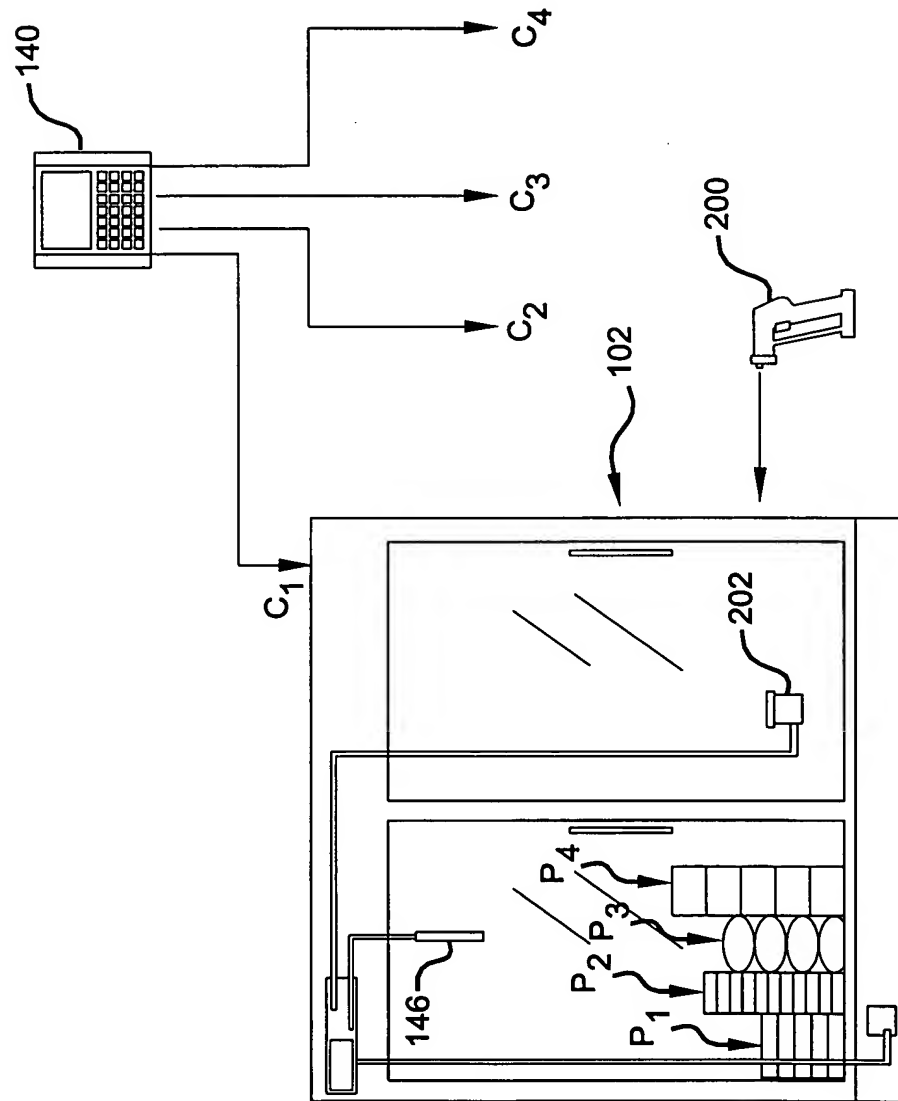


Figure 3

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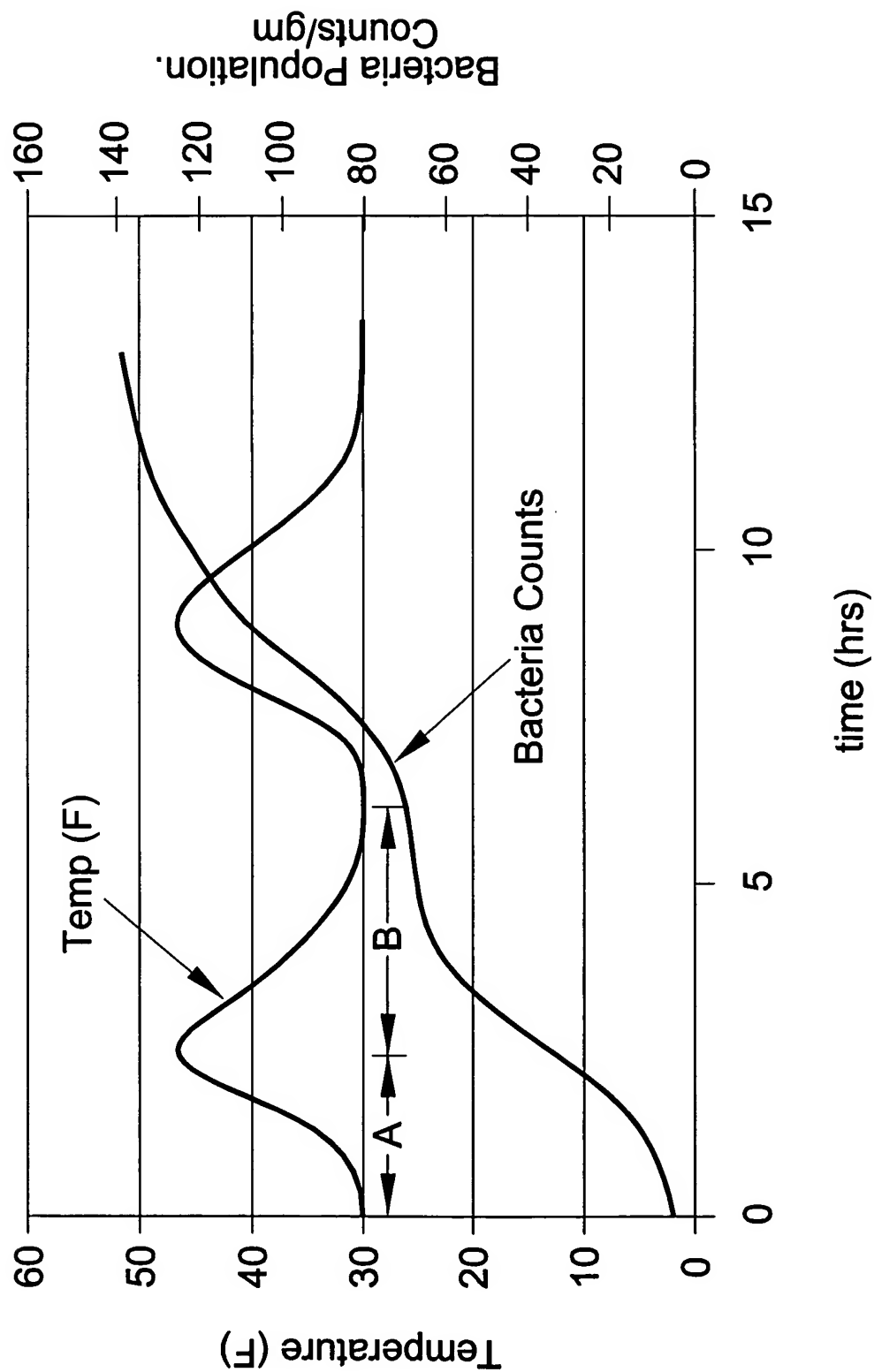


Figure 4

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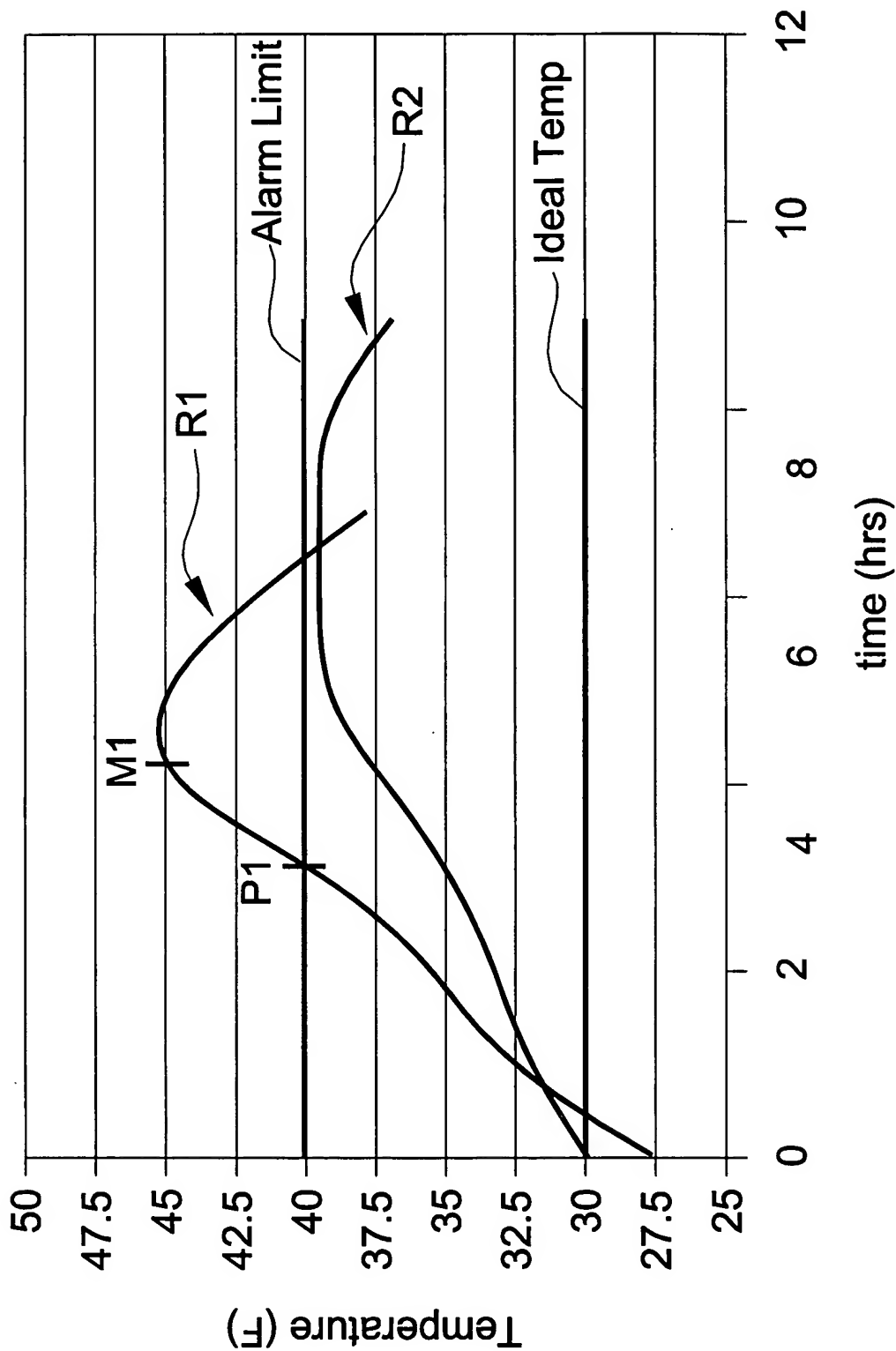


Figure 5

2023-04-13 14:36:30

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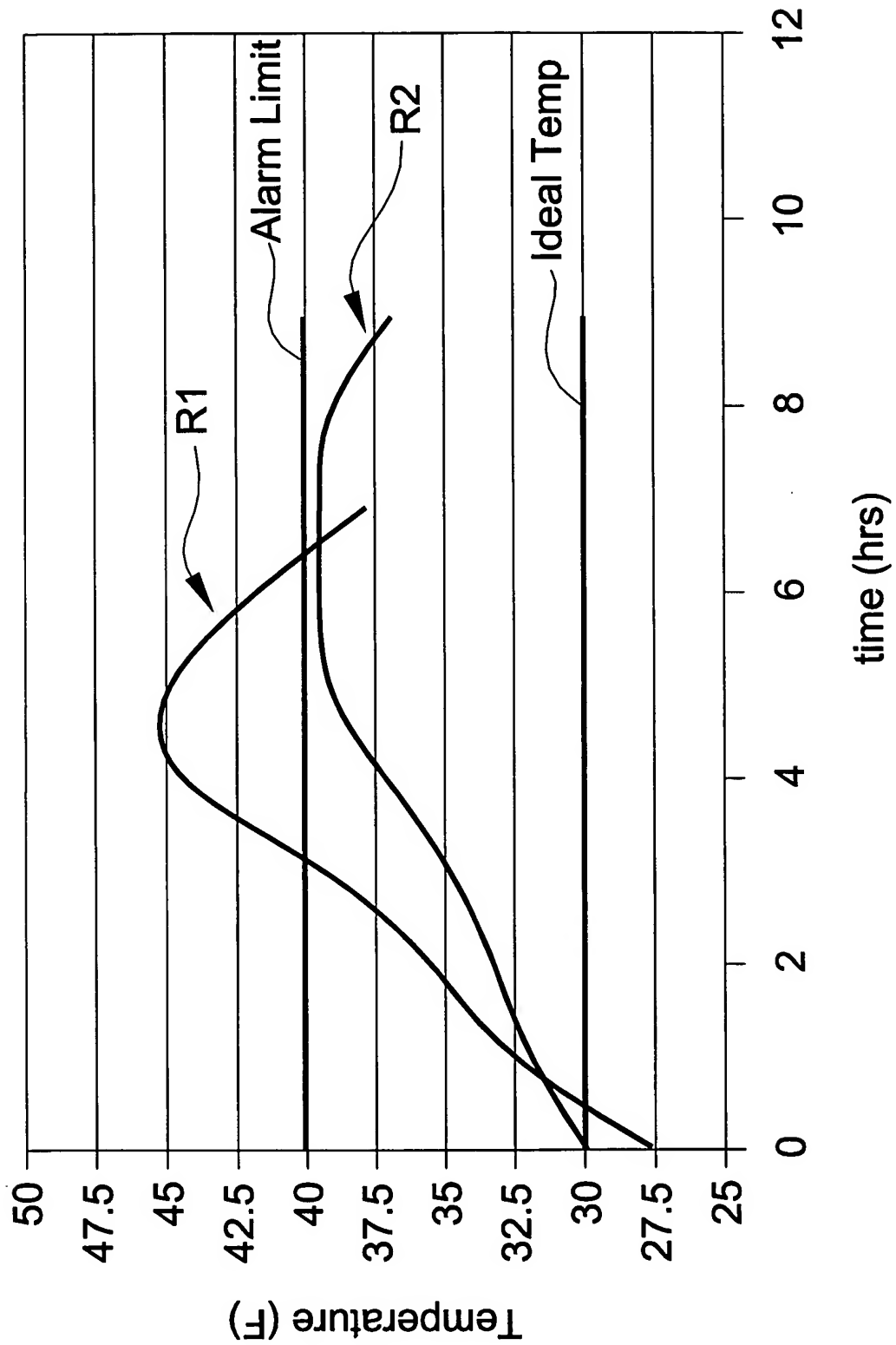
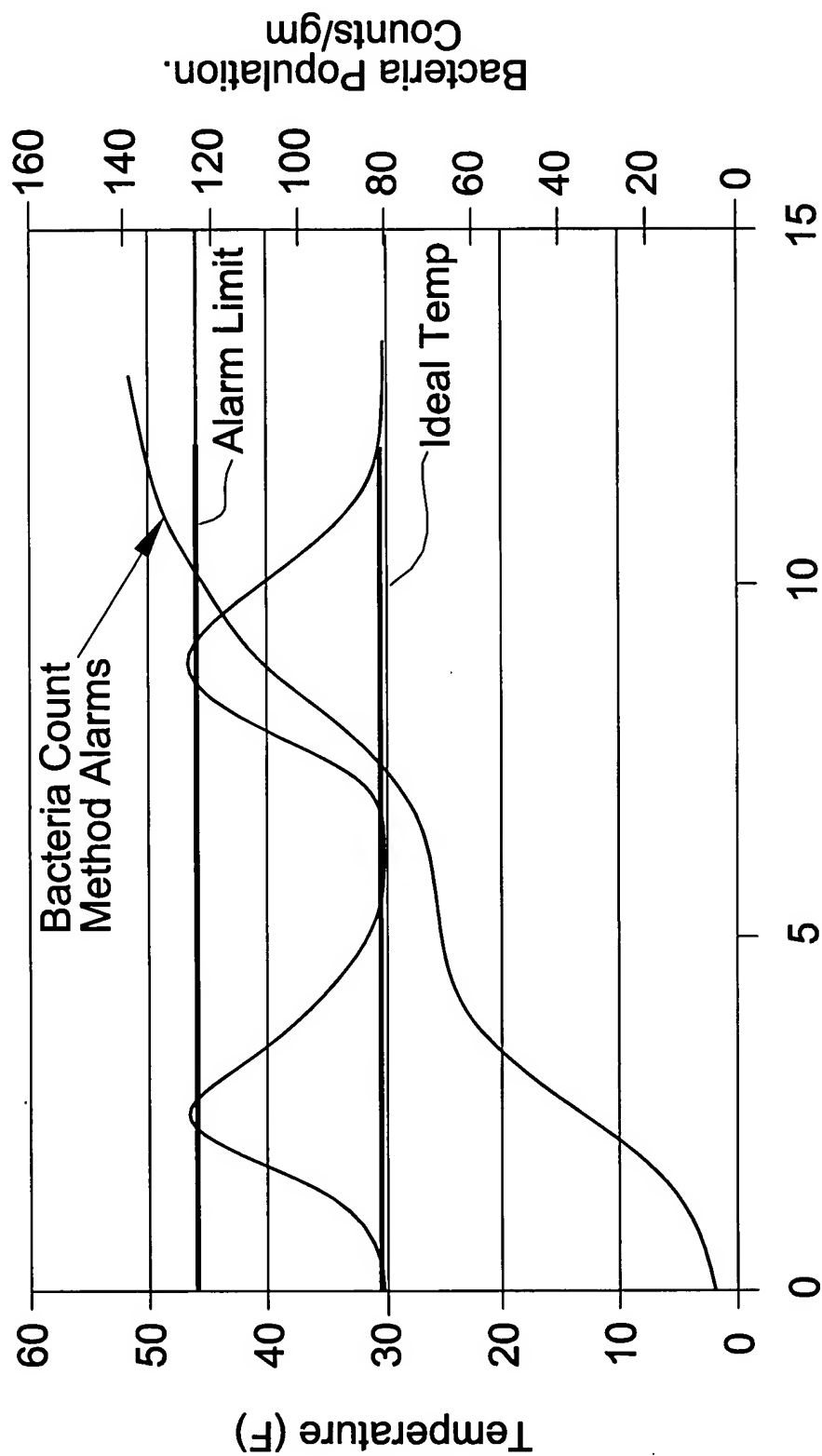


Figure 6

2023-04-26 14:36:23

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time (hrs)

Figure 7

2023-04-26 15:00

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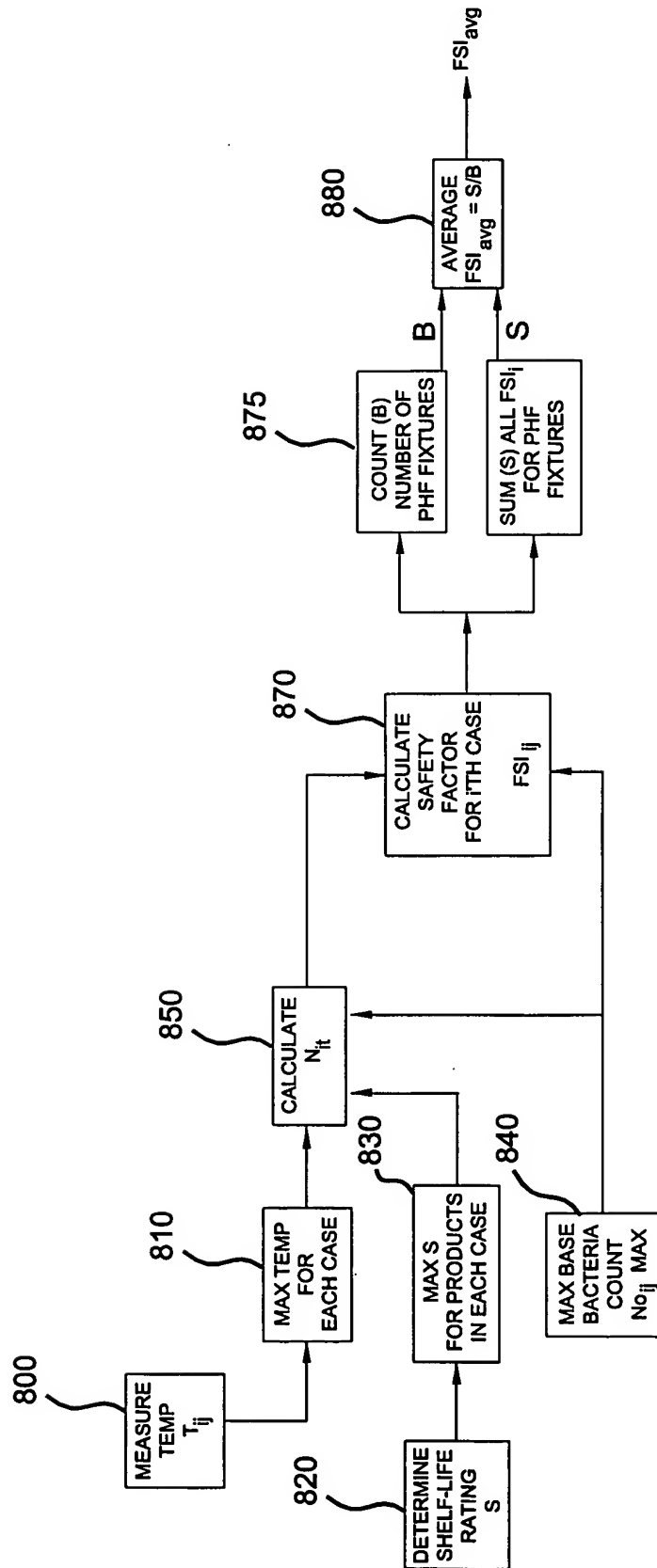


Figure 8

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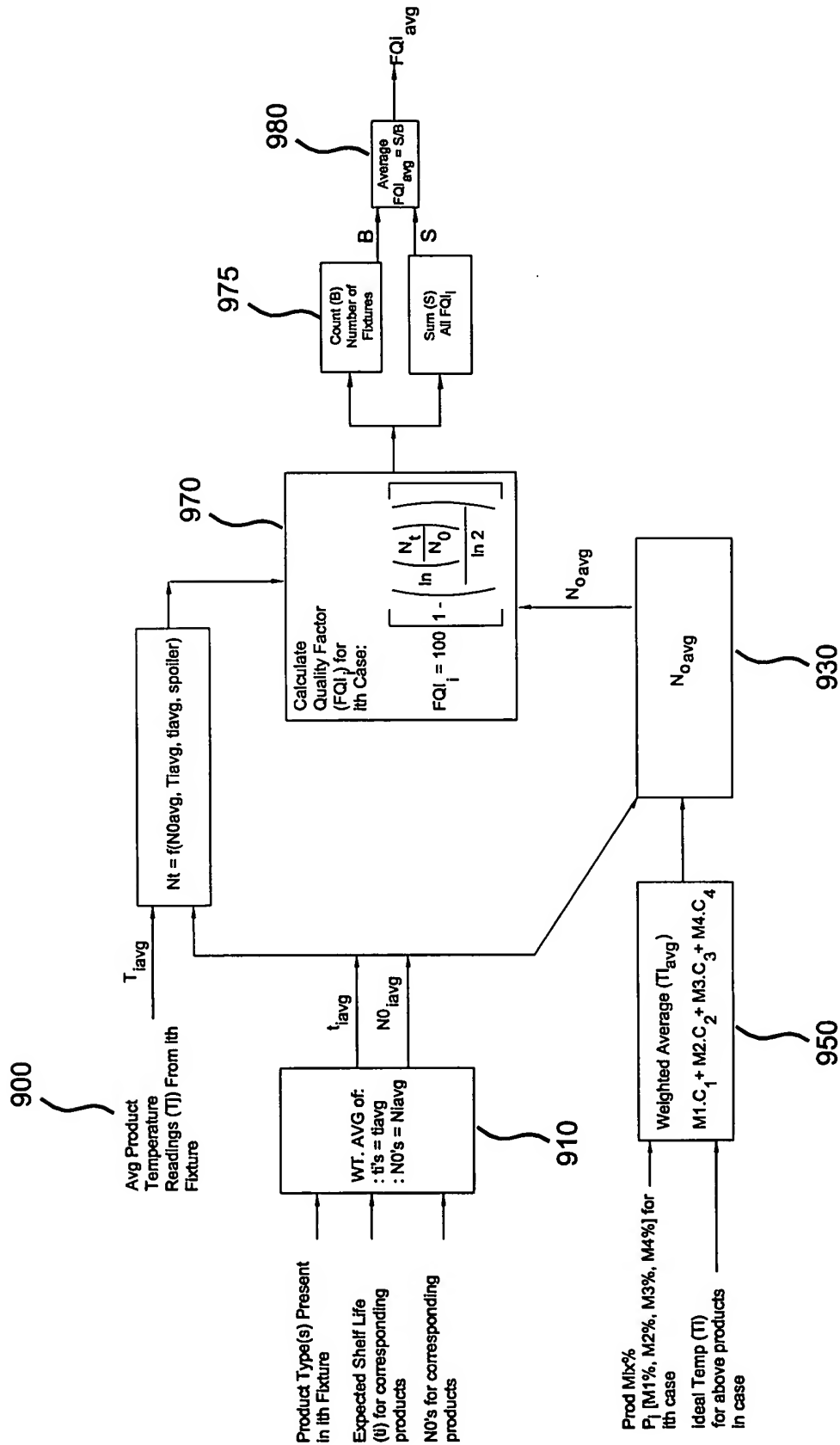


Figure 9

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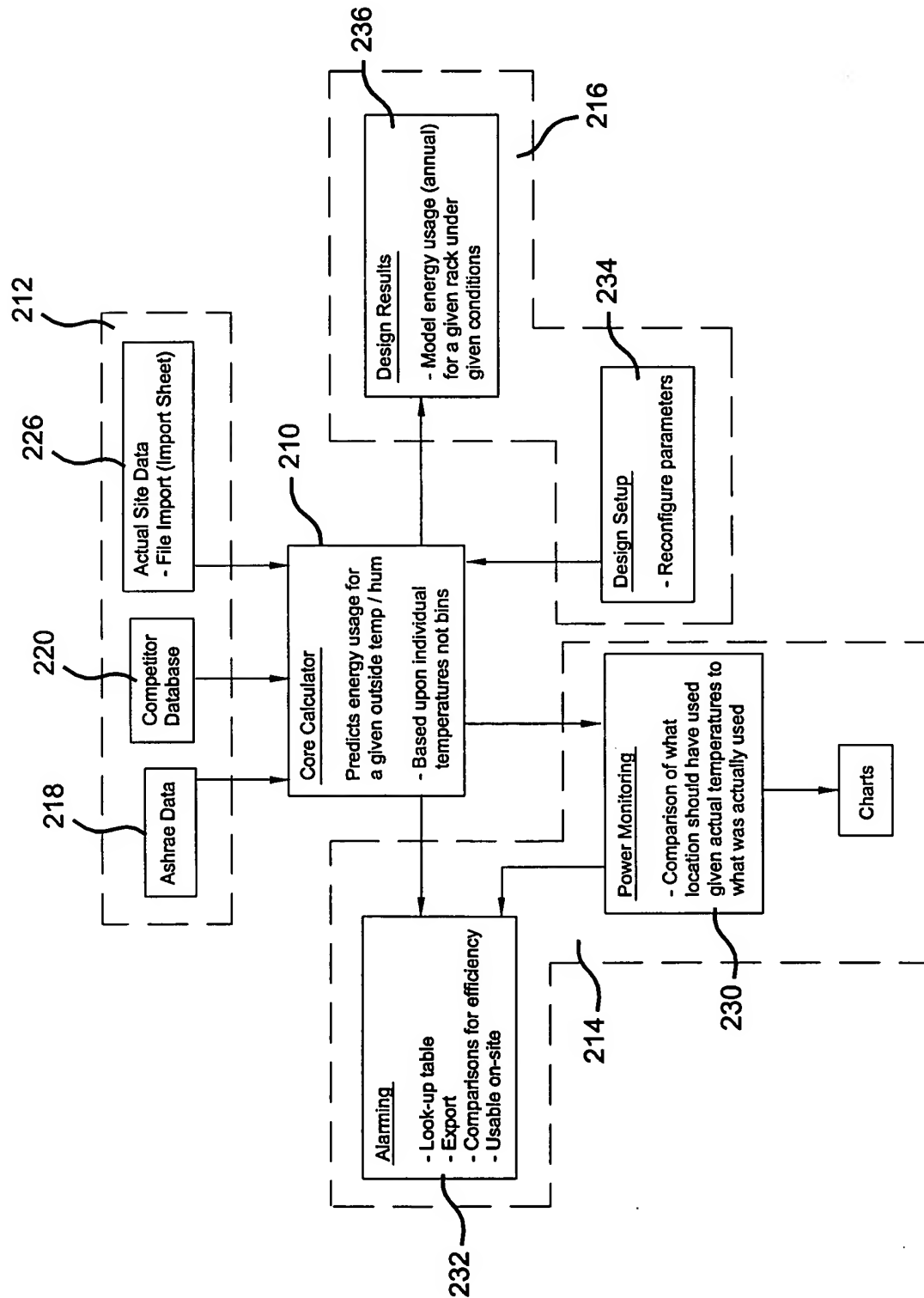


Figure 10

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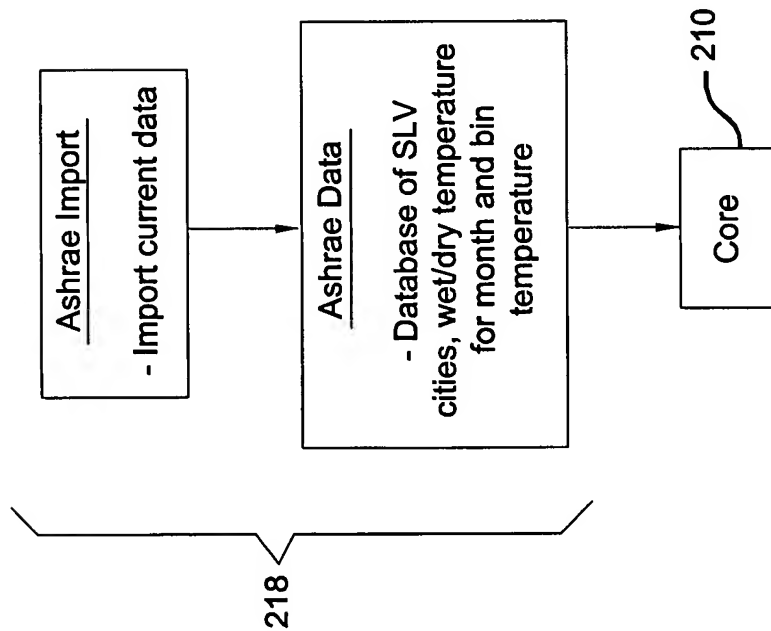


Figure 12

WYEC-2 site NMALBUQW.WY2 (Albuquerque, New Mexico)
Latitude: 35.05 Longitude: -106.62

quantity WYEC2 wetbulb

[illegible]

Figure 13

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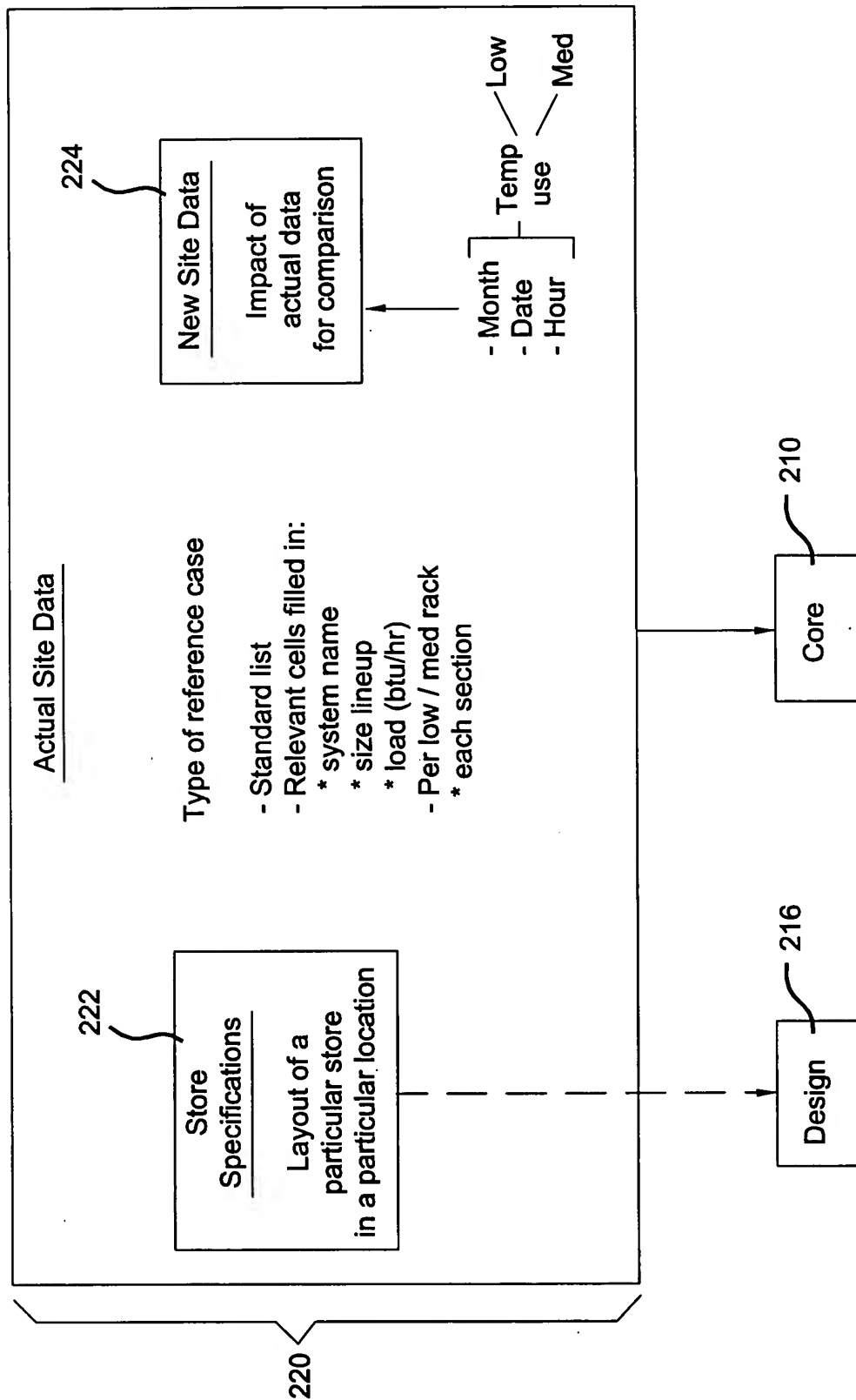


Figure 14

[illegible]

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DO NOT CHANGE... USED FOR ACTUAL DATA ... may be position dependent										ACTUAL DAY BY DAY, HOUR BY HOUR DATA FOR 24 HOUR PERIOD				
ACTUAL DAY BY DAY, HOUR BY HOUR DATA														
Data must be sorted by date and hour														
kwmonth	kwdate	kwhour	temp	kwuselt	kwusemt	Storepop	kwdate	kwhour	temp	kwuselt	kwusemt	Storepop		
1	01/18/01	1.0	44.8	40.8	43.0	2.0	1/18/01	1	39	39	43	2		
1	01/18/01	2.0	44.8	40.8	43.0	2.0	1/18/01	2	39	39	43	2		
1	01/18/01	3.0	44.8	40.8	43.0	2.0	1/18/01	3	39	39	43	2		
1	01/18/01	4.0	44.8	40.8	43.0	2.0	1/18/01	4	39	39	43	2		
1	01/18/01	5.0	44.8	40.8	43.0	2.0	1/18/01	5	39	39	43	2		
1	01/18/01	6.0	44.8	40.8	43.0	2.0	1/18/01	6	39	39	43	2		
1	01/18/01	7.0	44.8	40.8	43.0	2.0	1/18/01	7	39	39	43	2		
1	01/18/01	8.0	44.8	40.8	43.0	2.0	1/18/01	8	39	39	43	2		
1	01/18/01	9.0	44.8	40.8	43.0	2.0	1/18/01	9	39	39	43	2		
1	01/18/01	10.0	44.8	40.8	43.0	2.0	1/18/01	10	39	39	43	2		
1	01/18/01	11.0	44.8	40.8	43.0	2.0	1/18/01	11	39	39	43	2		
1	01/18/01	12.0	44.8	40.8	43.0	2.0	1/18/01	12	39	39	43	2		
1	01/18/01	13.0	44.8	40.8	43.0	2.0	1/18/01	13	39	39	43	2		
1	01/18/01	14.0	44.8	40.8	43.0	2.0	1/18/01	14	39	39	43	2		
1	01/18/01	15.0	44.8	40.8	43.0	2.0	1/18/01	15	39	39	43	2		
1	01/18/01	16.0	44.8	40.8	43.0	2.0	1/18/01	16	39	39	43	2		
1	01/18/01	17.0	44.8	40.8	43.0	2.0	1/18/01	17	39	39	43	2		
1	01/18/01	18.0	44.8	40.8	43.0	2.0	1/18/01	18	39	39	43	2		
1	01/18/01	19.0	44.8	40.8	43.0	2.0	1/18/01	19	39	39	43	2		
1	01/18/01	20.0	44.8	40.8	43.0	2.0	1/18/01	20	39	39	43	2		
1	01/18/01	21.0	44.8	40.8	43.0	2.0	1/18/01	21	39	39	43	2		
1	01/18/01	22.0	44.8	40.8	43.0	2.0	1/18/01	22	39	39	43	2		
1	01/18/01	23.0	44.8	40.8	43.0	2.0	1/18/01	23	39	39	43	2		
1	01/18/01	0.0	44.8	40.8	43.0	2.0	1/19/01	0	39	16	42	2		

Figure 16

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GENERAL MODEL CALCULATIONS																					
LOW and MEDIUM TEMP RACK kWh Use for Each Bin Hour																					
Amb Temp	Cond T Temp	Subcooler T Tin	Suct T.....-25F				Suct T.....-35F				Suct T..... 15F				Total Comp KW	Condenser Calculations			Annual Energy		
			Base Load.....	281,332	Comp Eff. 65%	Base Load.....	13,580	Base Load.....	65%	Base Load.....	65%	Base Load.....	65%	Heat of Rejection (Btu/hr)		req. cap.	fan KW	Comp kWh	Cond kWh	Total kWh	
			comp load	comp load	comp load	comp load	comp load	comp load	comp load	comp load	comp load	comp load	comp load	comp load							
-25	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	27%	0.35	29	0.35	30
-24	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	28%	0.35	29	0.35	30
-23	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	28%	0.35	29	0.35	30
-22	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	28%	0.36	29	0.36	30
-21	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	29%	0.36	29	0.36	30
-20	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	29%	0.37	29	0.37	30
-19	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	29%	0.37	29	0.37	30
-18	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	30%	0.38	29	0.38	30
-17	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	31%	0.39	29	0.39	30
-16	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	31%	0.39	29	0.39	30
-15	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	32%	0.40	29	0.40	30
-14	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	32%	0.41	29	0.41	30
-13	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	32%	0.41	29	0.41	30
-12	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	32%	0.41	29	0.41	30
-11	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	33%	0.42	29	0.42	30
-10	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	33%	0.42	29	0.42	30
-9	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	34%	0.43	29	0.43	30
-8	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	35%	0.44	29	0.44	30
-7	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	35%	0.45	29	0.45	30
-6	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	36%	0.45	29	0.45	30
-5	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	36%	0.46	29	0.46	30
-4	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	37%	0.47	29	0.47	30
-3	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	37%	0.48	29	0.48	30
-2	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	38%	0.48	29	0.48	30
-1	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	39%	0.49	29	0.49	30
0	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	40%	0.50	29	0.50	30
1	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	40%	0.51	29	0.51	30
2	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	41%	0.52	29	0.52	30
3	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	42%	0.53	29	0.53	30
4	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	43%	0.54	29	0.54	30
5	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	43%	0.55	29	0.55	30
6	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	44%	0.56	29	0.56	30
7	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	45%	0.57	29	0.57	30
8	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	46%	0.59	29	0.59	30
9	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	47%	0.60	29	0.60	30
10	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	48%	0.61	29	0.61	30
11	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	49%	0.63	29	0.63	30
12	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	50%	0.64	29	0.64	30
13	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	52%	0.65	29	0.65	30
14	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	53%	0.67	29	0.67	30
15	55.5285	40.5	40.5	-	281,332	27.76	-	13,580	1.58	-	-	-	-	-	29.34	395,006	54%	0.69	29	0.69	30

Figure 17

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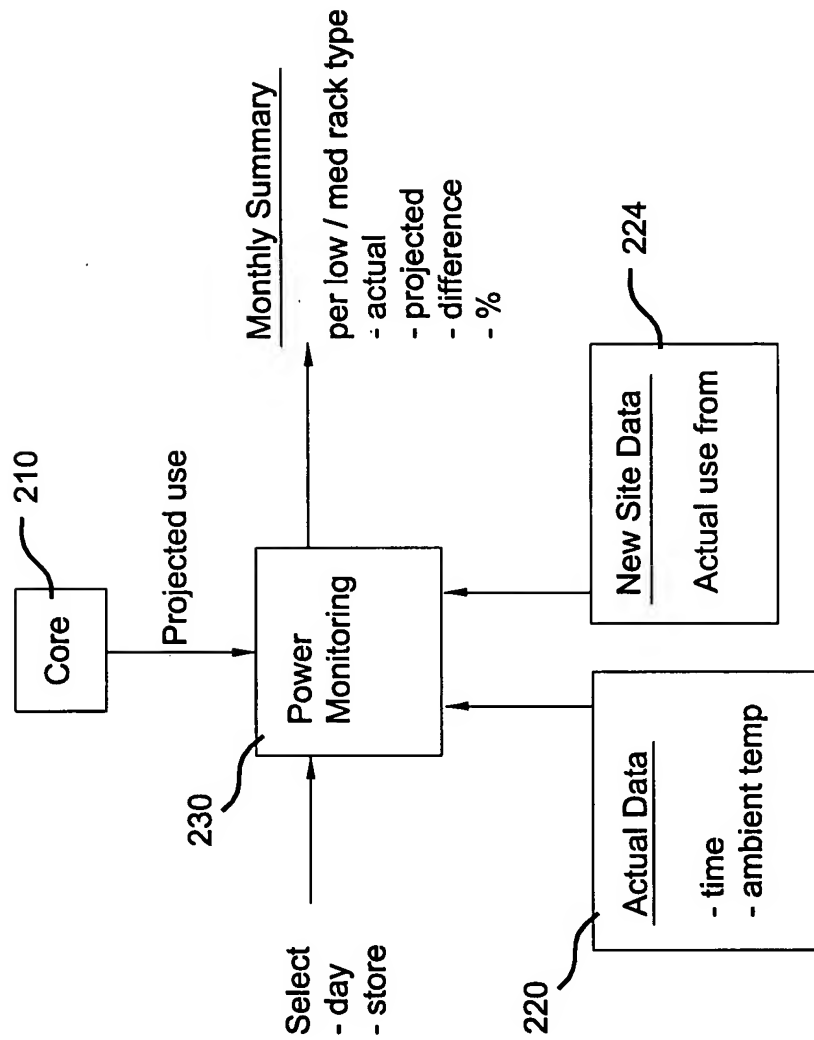


Figure 18

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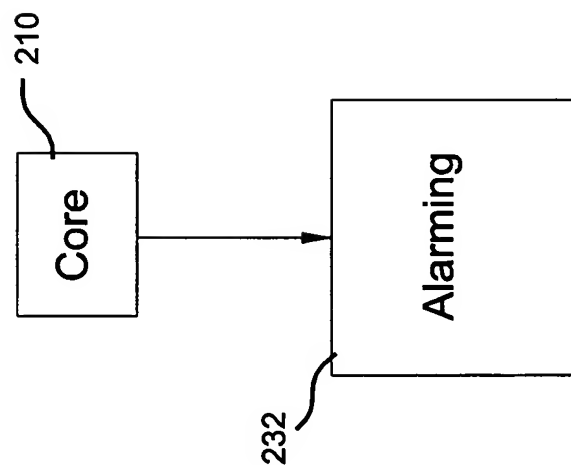


Figure 19

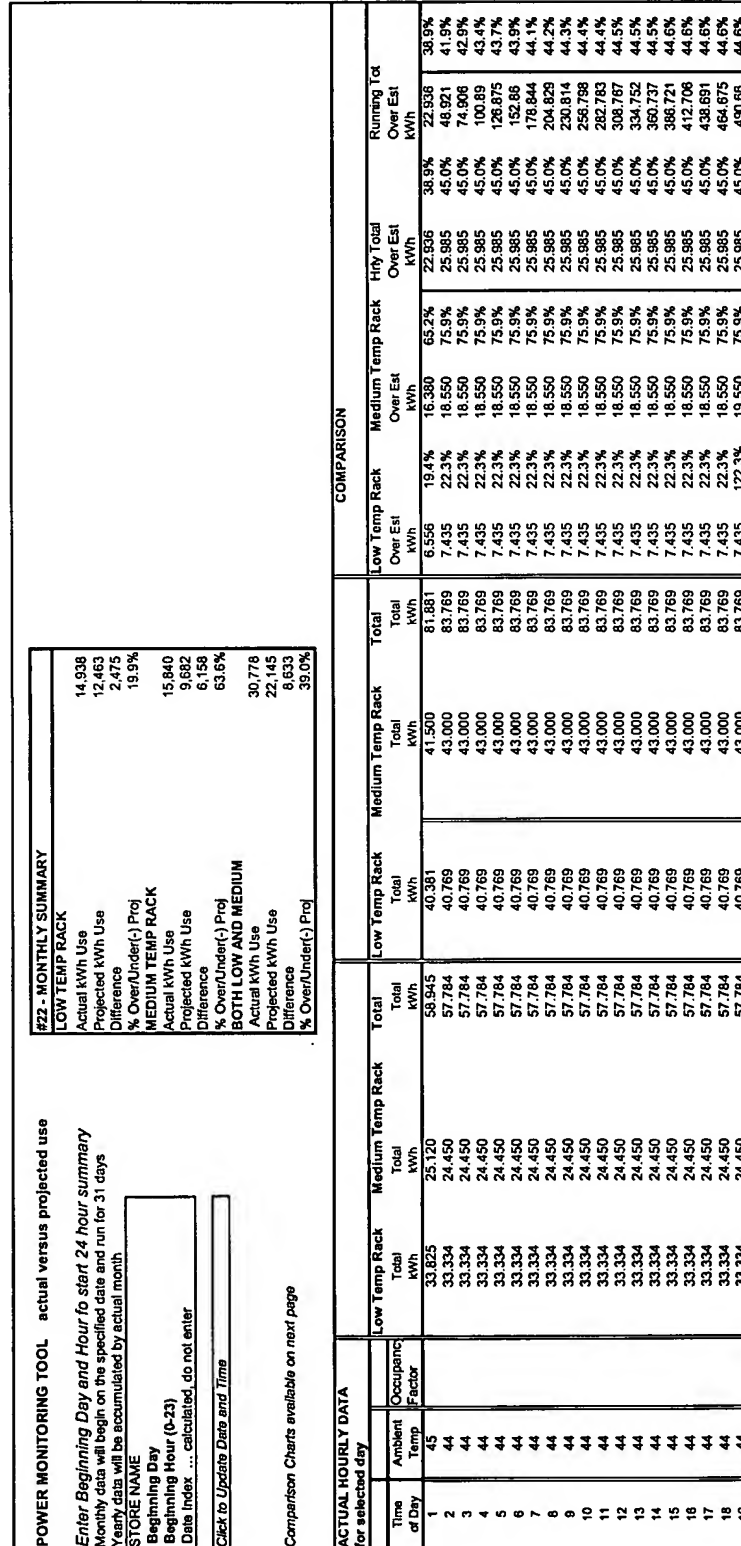


Figure 20

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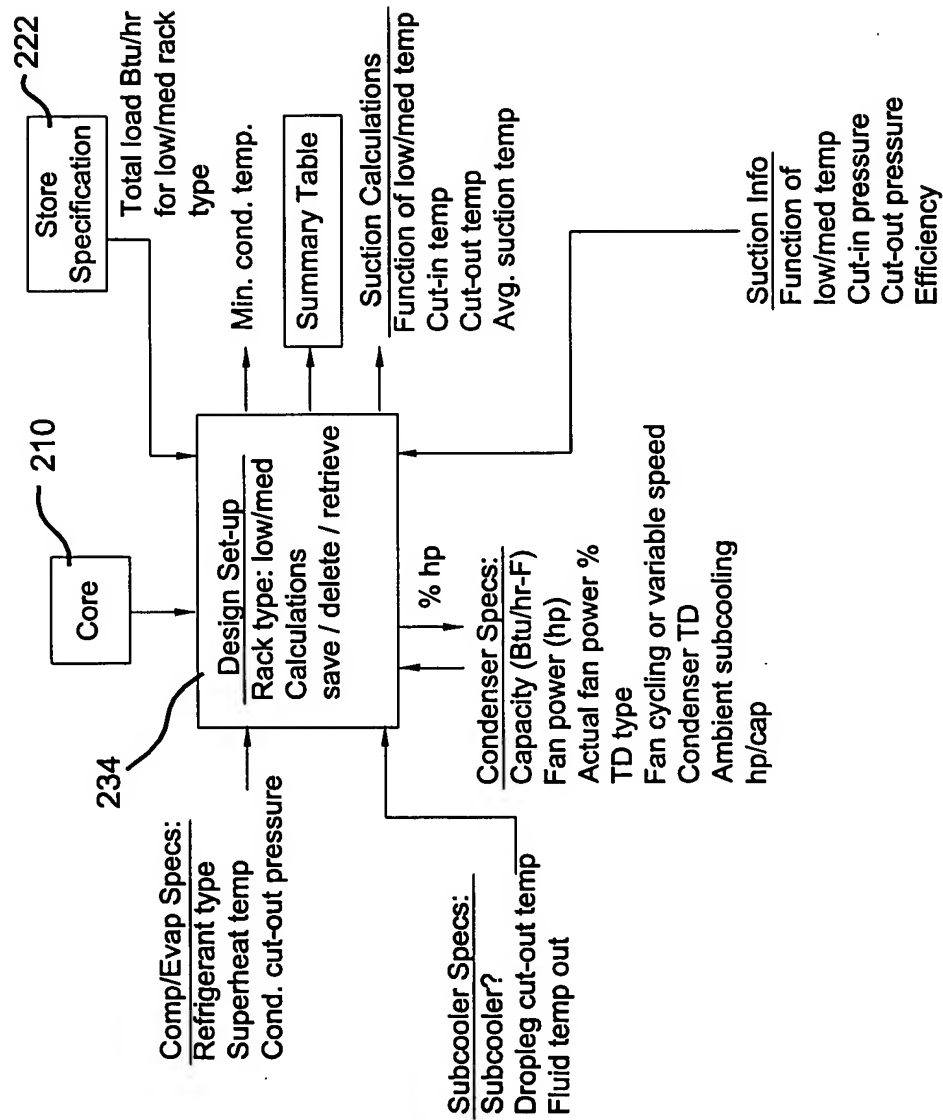


Figure 21

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DESIGN TOOL SETUP		AZPHNIXT (Phoenix)		STORE:	#22	Period	Alt								
Select Scenario, Enter Specifications Below, and Save Scenario															
<div> <input type="button" value="Save"/> <input type="button" value="Delete"/> <input type="button" value="Retrieve"/> </div>		<div> <div> <div>#1 BASE CASE - - High cond temp -LT Rack 2/4/01 807,550 kW</div> <div>#2 RETROFIT CAS - Rev Disch and Suct Press 2/4/01 769,018</div> <div>#3 BASE CASE - - No Subcooler 3/10/01 1,125,150 kWh</div> <div>#4 is available</div> <div>#5 is available</div> <div>#6 is available</div> <div>#7 is available</div> <div>#8 is available</div> <div>#9 is available</div> <div>#10 is available</div> </div> <div> <div>Scenario</div> <div>Comment</div> <div>Date</div> <div>Scenario#</div> <div>Period</div> </div> <div> <div>Retrofit Case</div> <div>Rev Disch and Suct Press</div> <div>2/4/2001</div> <div>2</div> <div>All</div> </div> </div>													
Enter items in 'bold' above, before saving scenario															
CURRENT SCENARIO															
Scenario															
Comment															
Date															
Scenario#															
Period															
Enter items in 'bold' above, before saving scenario															
LOW to MEDIUM TEMP RACK															
Comp/Evap. Spec.															
Refrigerant.....	R-507	Suction #1	-25F	Loads	-25.5F	Suction #2	-35F	Loads	-35.3F	Suction #3	Cut-in:	Cut-out:	15F	Loads	14.8F
Superheat.....	25F	Cut-in:	14.0psig	14.0psig	-25.5F	Cut-in:	8.0psig	-35.3F	52.0psig	Cut-out:	52.0psig	14.8F	14.8F	14.8F	14.8F
Min. cond. temp.....	55.5F	Cut-out:	14.0psig	14.0psig	-25.5F	Cut-out:	8.0psig	-35.3F	52.0psig	Avg suction	52.0psig	14.8F	14.8F	14.8F	14.8F
Condenser cut-out:	120.0psig	Avg suction	14.0psig	14.0psig	-25.5F	Avg suction	8.0psig	-35.3F	52.0psig	Comp Eff	65%	65%	65%	65%	65%
Subcooler Characteristics		Comp Eff	14.0psig	14.0psig	-25.5F	Comp Eff	8.0psig	-35.3F	52.0psig	Total design load.....	13,580	100%	100%	100%	100%
Subcooler?	Y	Total design load.....	281,332	281,332	100%	Total design load.....	281,332	281,332	100%	Diversity factor.....	100%	100%	100%	100%	100%
Dropleg cutout temp	50F	Diversity factor.....	281,332	281,332	100%	Diversity factor.....	281,332	281,332	100%	Actual load.....	13,580	100%	100%	100%	100%
Fluid temp out	50F	Actual load.....	281,332	281,332	100%	Actual load.....	281,332	281,332	100%	Total design load.....	13,580	100%	100%	100%	100%
Condenser Characteristics															
Capacity	18,000 Btu/hr-F														
Fan Power	2 hp														
Actual Fan Power	85%														
Select TD type below	fan cycling														
fan cycling or variable speed	20F														
Condenser TD	15F														
Amb. Subcooling	1/3														
hp/cap =	2.71														
%hp = (%cap)^															
RACKS		BTU/hr	Compr	Cond	Total										
LowTemp	294,912	350,372	12,080	362,452											
HighTemp	615,221	376,987	29,580	406,567											
Total	910,133	727,359	41,660	769,019											
taken from Design Tool Results															

Figure 22

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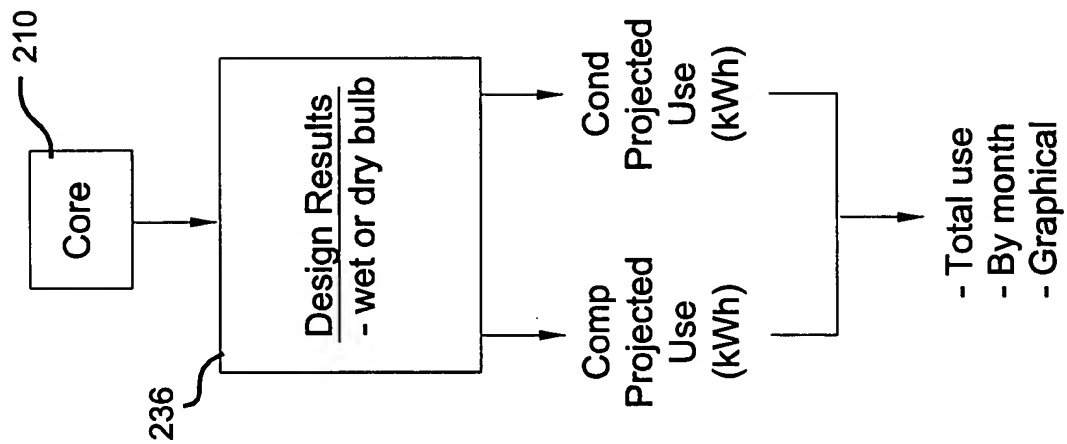


Figure 23

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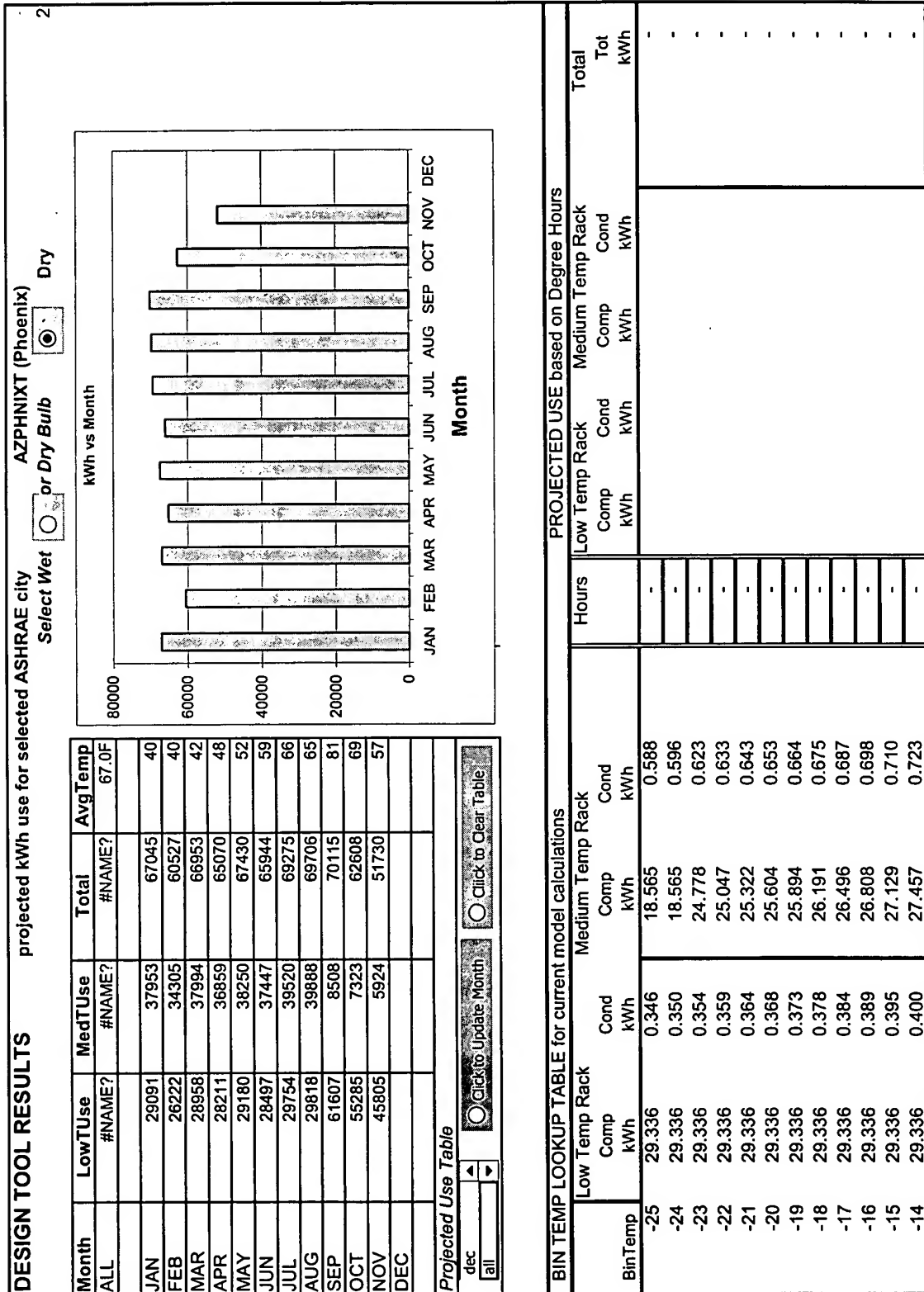


Figure 24

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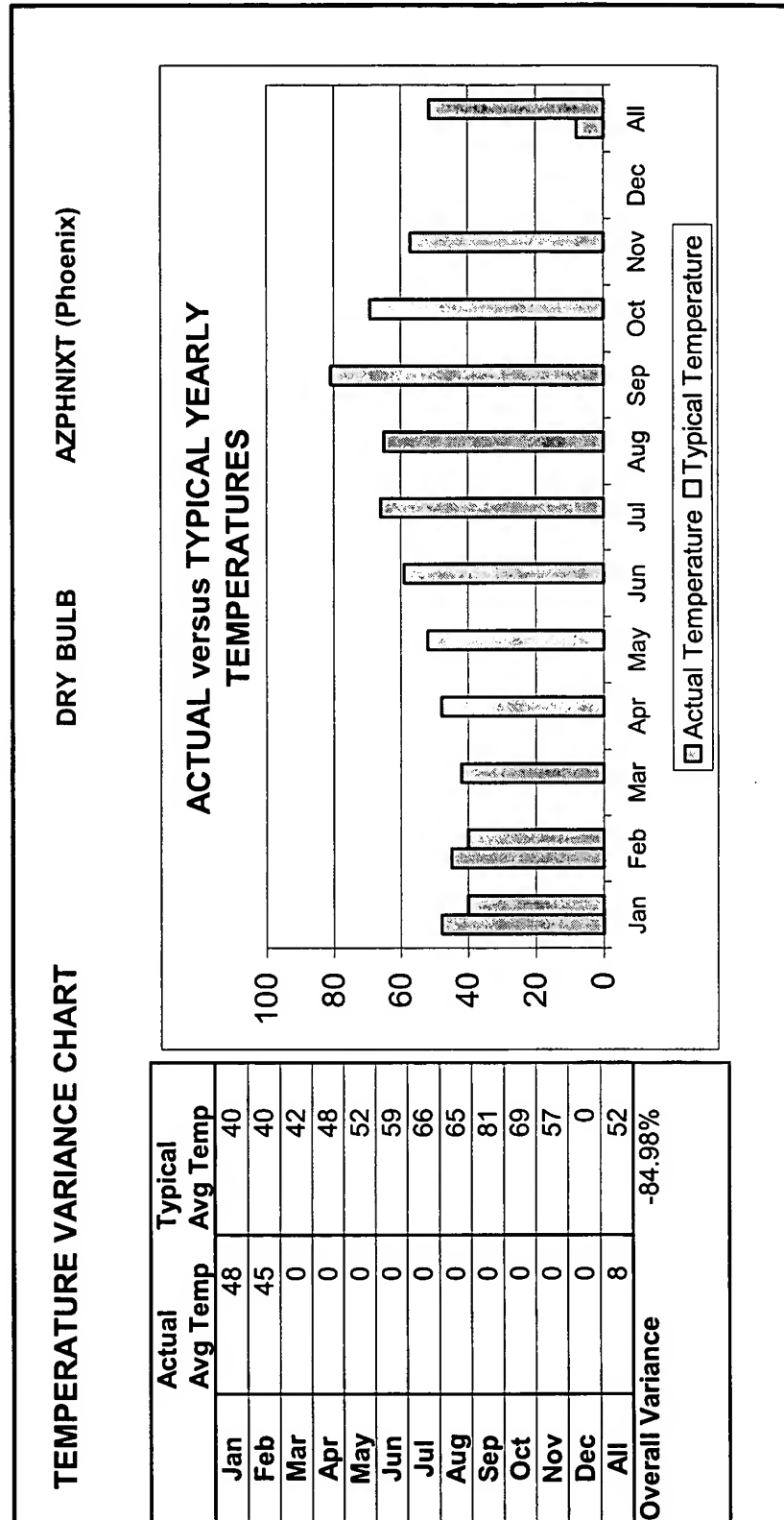


Figure 25

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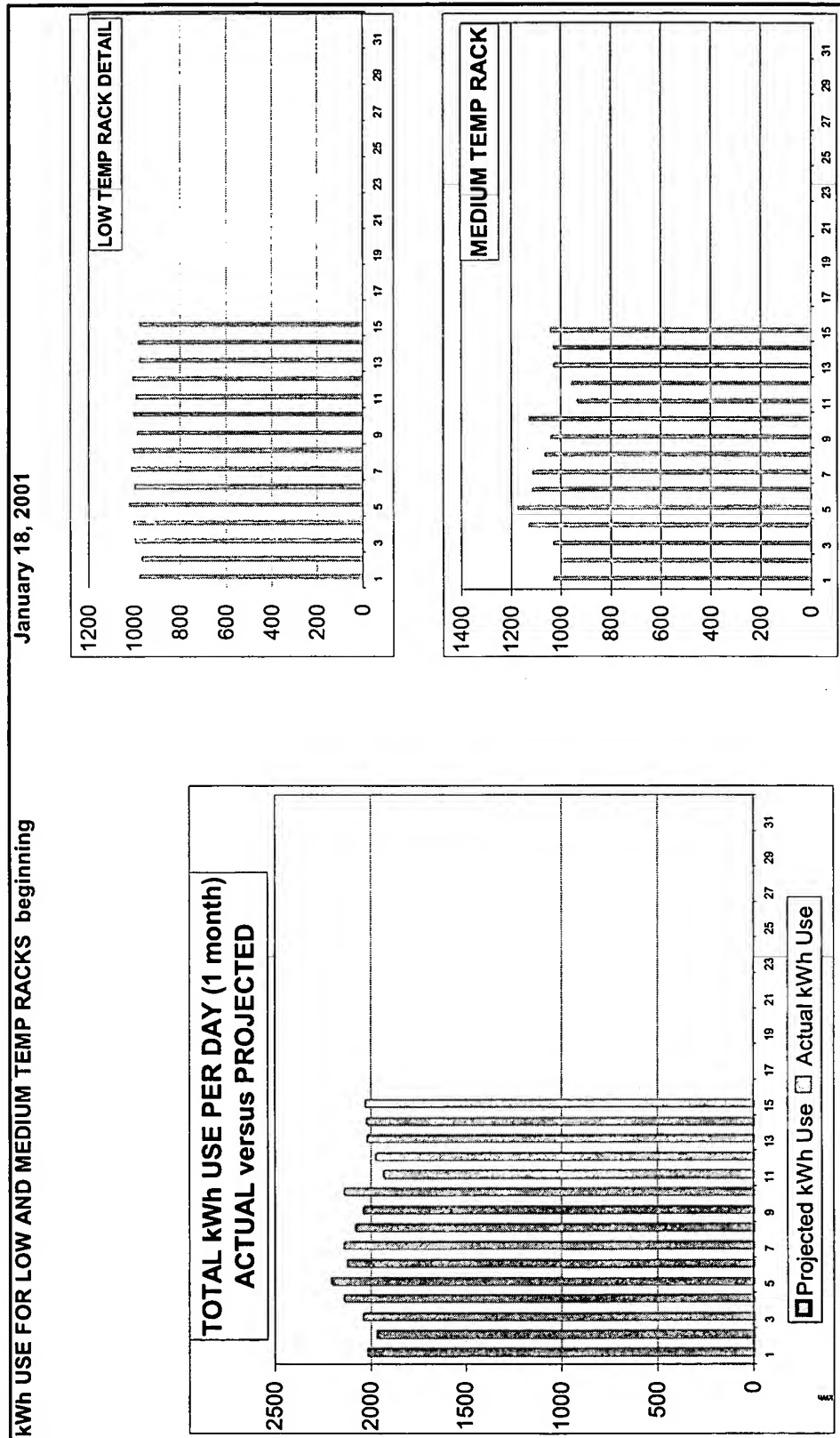
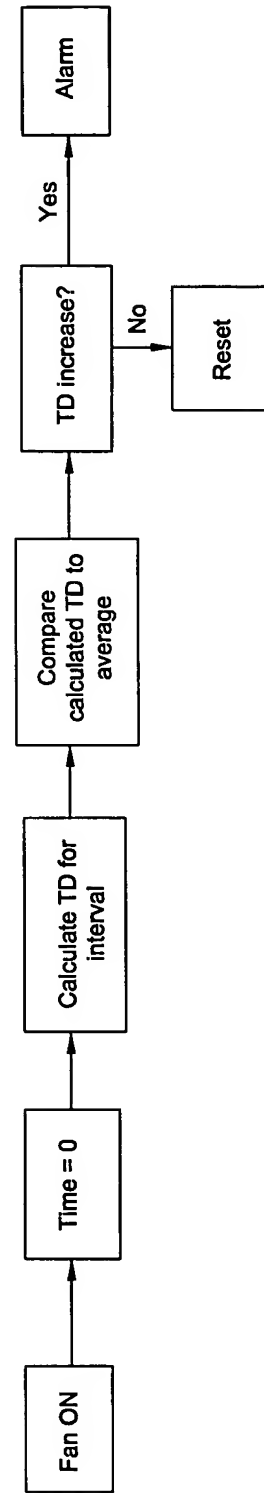
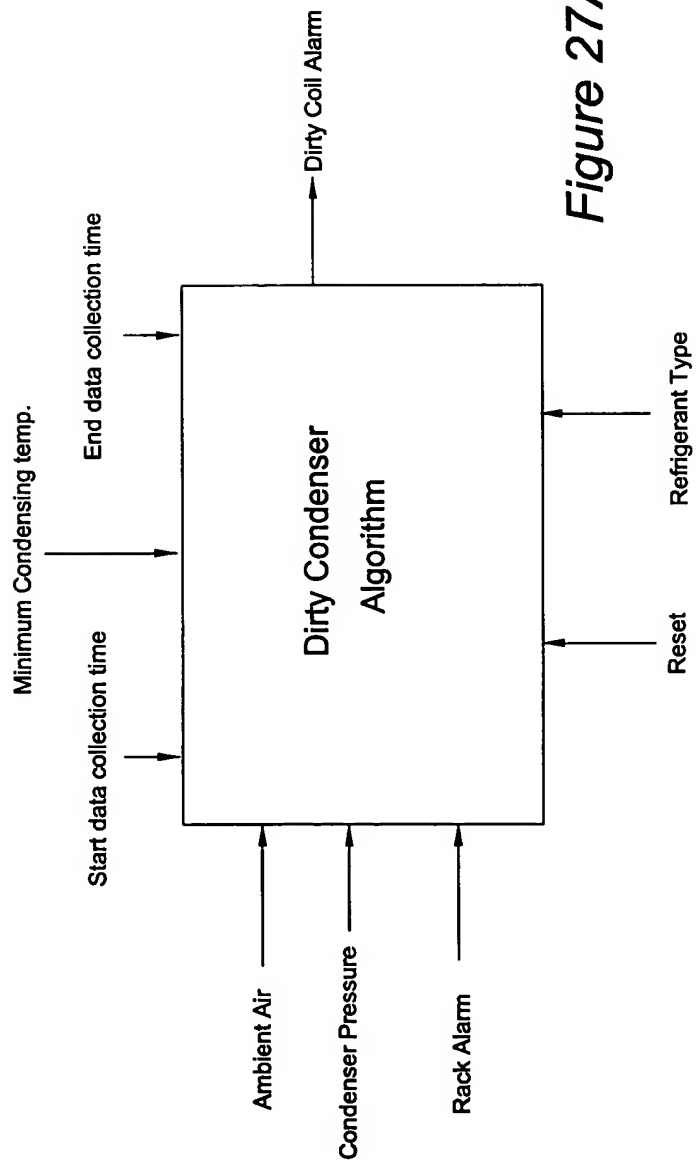


Figure 26

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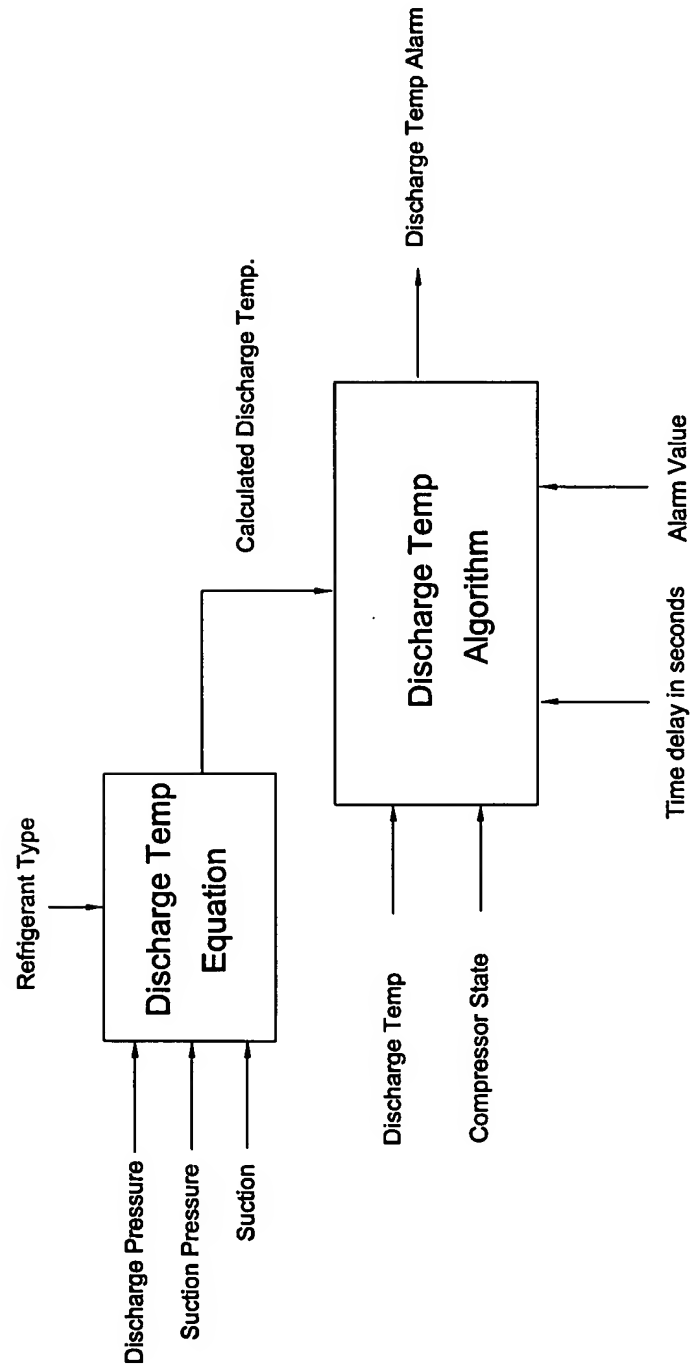


Figure 28

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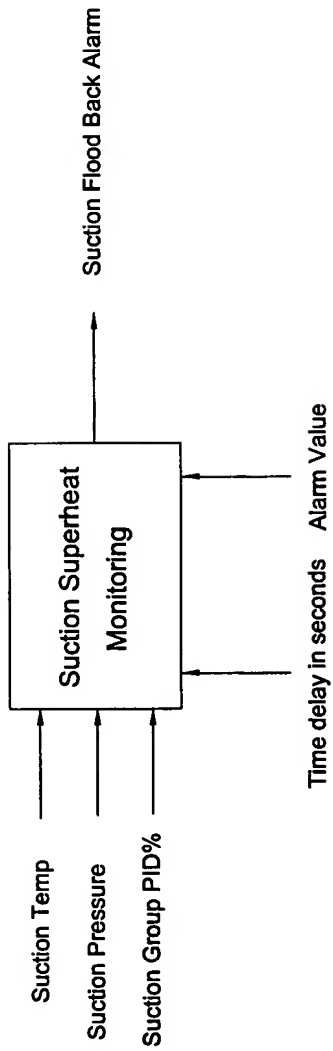


Figure 29A

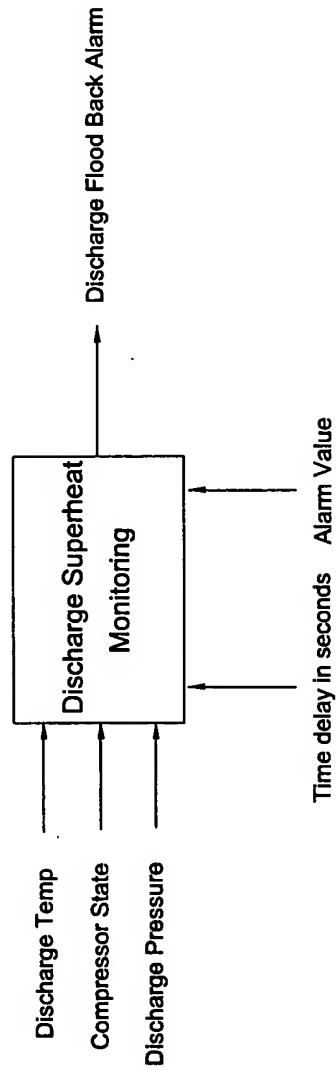


Figure 29B

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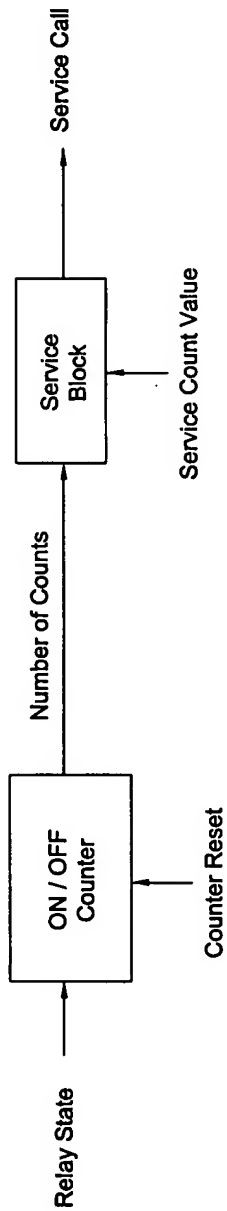


Figure 30

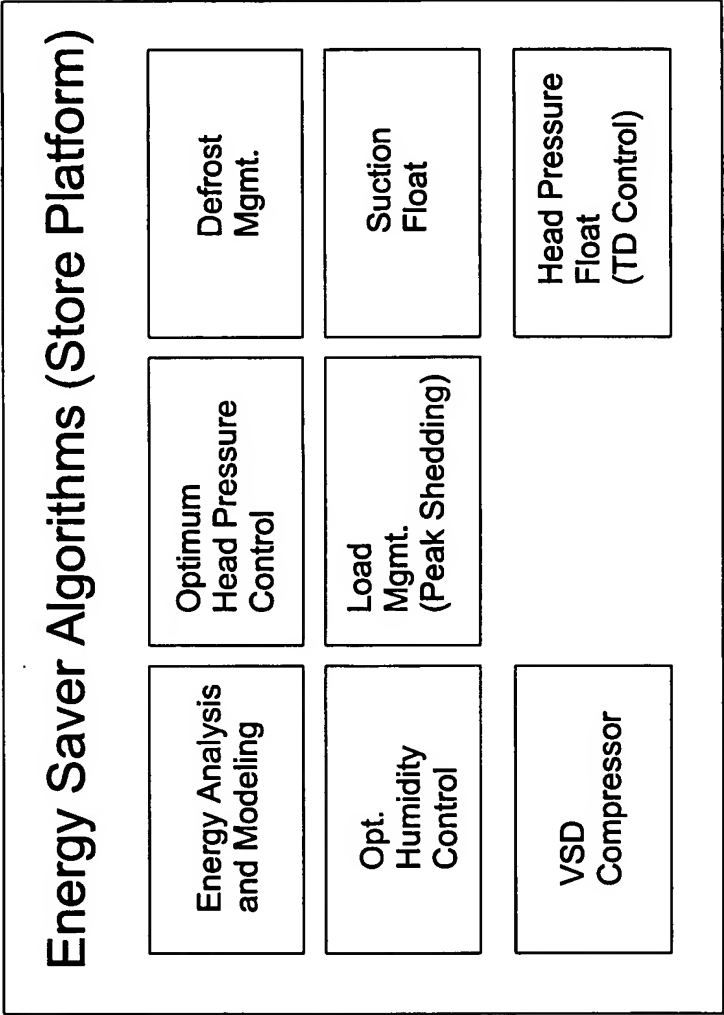


Figure 31

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Actions								
Disc. Air Temp. Sensor Failed	Prod. Temp. Sensor Failed	Disc. Air Temp. Exceeded	Prod Time-Temp. Exceeded	Prod Degree-Min. Exceeded	Prod FDA Time-Temp. Exceeded	Spoiler Count Exceeded	Pathogen Count Exceeded	Prod Temp. Cycling
×								Maintenance Advisory: Non-emergency repair
	×							Maintenance Advisory: Maintenance review remotely and respond as necessary
	×							Store Advisory: Store advised to manually check product temperatures, Maintenance Advisory: Non-emergency repair
×	×							Maintenance Alarm: Immediate action required. Store Advisory: advise manually check of product temperatures
							×	Maintenance Advisory: Review remotely and respond as necessary
			×					Store Advisory: Store advised to inspect / correct per procedures; Call maintenance if cannot resolve
				×				Store Alarm: Store must check product temperatures and condition; remove to other refrigerated storage as reqd.
						×		Store Alarm: Store must immediately inspect product in affected fixture; remove product per date code limits
							×	Store Emergency: Store must immediately remove and discard product per date code limits from affected fixture(s)

Figure 32

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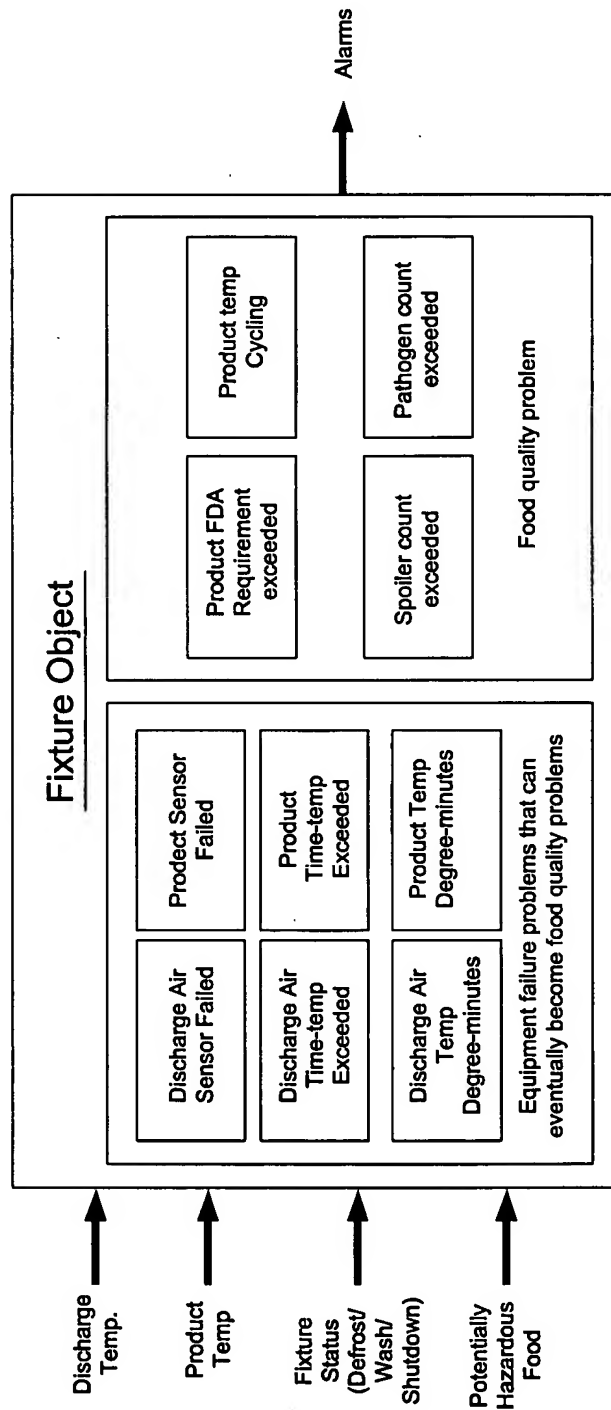


Figure 33

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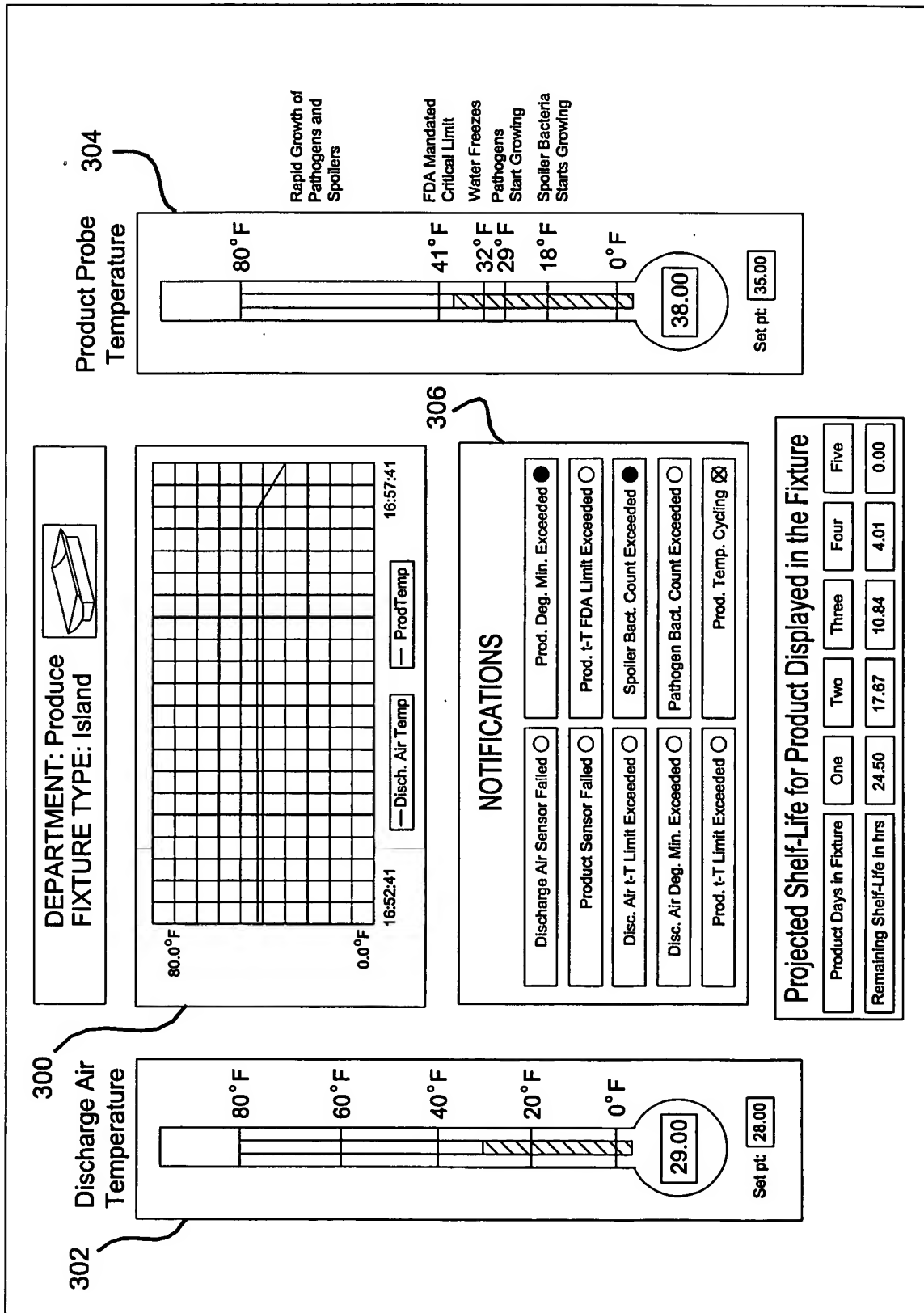


Figure 34